AMENDMENTS TO THE DRAWINGS

Attached herewith are two (2) corrected drawing sheets to be substituted for the corresponding drawing sheets presently on file in the above-identified application. The attached replacement drawing sheets include the changes to Figures 8 and 10. More specifically, the changes are as follows:

In Fig. 8, reference designator "209" has been amended to read --309--, and reference designator "213" has been amended to read --313--.

In Fig. 10, in decision block E211, the text "FOR j = 1 á k" has been amended to read --FOR j = 1 to k--, and in decision block E204, the formula "n - m ≥0" has been amended to read --N_c - m ≥0--.

These changes are not believed to add new matter to the original disclosure.

Attachments: Replacement Sheets

Annotated Sheets Showing Changes

REMARKS

This application has been reviewed in light of the Office Action dated November 2, 2004. Claims 1-33 are presented for examination, of which Claims 1, 15, 16, and 30-33 are in independent form. Claims 1, 7, 9, 16, 22, 24, and 31-33 have been amended to define still more clearly what Applicants regards as their invention. Claims 2-6, 8, 10-15, 17-21, 23, and 25-30 have been amended as to matters of form only. No change in scope is either intended or believed effected by at least these latter changes. Favorable reconsideration is requested.

Two sheets of corrected formal drawings have been submitted herewith, in which Figures 8 and 10 have been amended to correct typographical errors. Applicants submit that the drawing changes add no new matter to the original disclosure. Approval of the corrected drawings is respectfully requested.

Applicants gratefully acknowledge the indication that Claims 15 and 30 have been allowed, and that Claims 10, 12-14, 25, and 27-29 would be allowable if rewritten so as not to depend from a rejected claim, and with no change in scope. The latter claims have not been so rewritten because, for the reasons given below, the respective base claim of each is believed to be allowable.

The Office Action objected to Claims 9 and 24 as being in improper multiple dependent form. These claims have been rewritten to eliminate the improper multiple

dependency. Accordingly, Applicants believe that the objection has been obviated, and respectfully request its withdrawal.

Claims 1-8, 11, 16-23, 26, and 33 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,444,697 (*Leung et al.*); and Claims 31 and 32 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Leung et al.*

As shown above, Applicants have amended independent Claims 1, 16, and 31-33 in terms that more clearly define what they regard as their invention. Applicants submit that these amended independent claims, together with the remaining claims dependent thereon, are patentably distinct from the cited prior art for at least the following reasons.

The aspect of the present invention set forth in Claim 1 is a method of generating a reference event in a receiving network node receiving frames of information from a transmitting network node. The method, executed when a frame of information is received, includes sampling the frame of information in order to form sampled data, and processing the sampled data in order to detect from the sampled data a specific data. The method further includes monitoring the number of processed sampled data until the detection of the specific data, and generating from the received frame of information the reference event on which the transmitting network node and the receiving network node must synchronize at a time dependent on the result of the monitoring step.

Among other notable features of Claim 1 is generating from the received frame of information the reference event on which the transmitting network node and the receiving network node must synchronize at a time dependent on the result of the monitoring step.

The present invention, as recited in Claim 1, concerns the operation of a reference event in a network where synchronization between nodes (for example, nodes A and B) is needed. Nodes A and B are respectively located on two buses 10 and 12 in a communication network (Figure 1, page 8, lines 20-24, page 9, lines 16-18, and page 10, lines 12-19). The synchronization method is based on the determination of a reference moment to generate a reference event from a received frame of information on a receiving node which will be described later on with reference to Figures 8-10 (page 10, line 13 to page 11, line 3). For example, the reference event generated according to Claim 1 is a corrected start of a frame for network synchronization, for example an IEEE 1394 network synchronization (page 8, lines 3-10, of the present patent application). Further, it can be understood from page 11, line 22 to page 12, line 15, that the transmitter network and the receiver network must synchronize at a time which depends on specific data which was previously detected. This can also be derived from the description at page 27, line 9, to page 32, line 2, and page 39, lines 6-9.

Leung et al. relates to the synchronization of digital data transmitted between an emitter and a receiver through data frames on a radio link, where synchronization is achieved on a frame by frame basis. *Leung et al.* discusses several stages for performing the synchronization

of a data frame received by a receiver to generate a reference that will be used for decoding encoded data in the data frame. These stages, Phases I, II, and III are described at column 11, lines 5-21, and are depicted in Figures 9, 10, 14, and 16. Further details of these stages are beginning from column 12, line 60 (this passage refers to figure 9).

Column 12, line 60 *et seq.* discusses sampling of the received analog signal and conversion to digital data (Phase I).

Phase II (coarse synchronization) is discussed at column 14, line 30, to column 16, line 44, where the sampled data stored in data buffer 110 are correlated with a reference synchronization signal 120 in the frequency domain (Figure 14). The output of correlation detector 122 is input to an interpolating filter 124 and a peak detector 126 monitors the output of interpolating filter 124 and records the location of the peak value. As mentioned at column 15, lines 23-25, the peak located during Phase II corresponds approximately to the point of synchronization. A Data Index Calculator 130 converts the output of the peak detector to an index pointer that identifies the location, in the data buffer 110, of the synchronized data block.

Leung et al. discusses at column 16, line 45 *et seq.* the operations performed during Phase III (fine synchronization). During Phase III, the received data frame is submitted to a FFT 140 whose output is directed to a hardware equalizer 142 to compensate for the known phase and magnitude distortions of the communications channel using equalization information 123. A fine synchronization is performed on the resulting set of data through calculating a time

shift that maximizes the correlation of the received signal with the reference synchronization signal.

The "reference event" claimed in independent Claim 1 is, for instance, a synchronization signal which is sent by the synchronization unit 303 or 340 to the upper layer of the network node (signal of reference 64 in figure 8). The reference signal is generated at a moment which is dependent on the detection of specific data from sampled data - specific data E, the start of data frame - which is determined with precision, regardless of the transmission conditions. As shown schematically in Figures 11 and 12, the signal 64 is sent at a time which is equal to the moment of detection of the specific data (S(0) in the description) plus a predetermined delay (page 40, line 12, to page 41, line 27), which corresponds to the processing of the samples of the data frame by a demodulator. Thus, the reference event is sent to the upper layers when the start of the data frame is available.

In contrast, *Leung et al.* does not disclose the generation of a reference event at a time dependent on a specific data previously detected, where the reference event is used for synchronizing two nodes in a network. This is because *Leung et al.* is only concerned with the synchronization of each OFDM frame independently, in order to correctly recover data from a received data frame. Specifically, as has been explained above, *Leung et al.* is concerned with the generation of reference within a receiver receiving a data frame, where the reference is used within the receiver in order to accurately decode the data frame. Such a reference is not used for

network synchronization purposes. Further, *Leung et al.* is totally silent on the synchronization of a transmitter and a receive node in a network.

Accordingly, Applicants submit that nothing has been found in *Leung et al.* that would teach or suggest generating from the received frame of information the reference event on which the transmitting network node and the receiving network node must synchronize at a time dependent on the result of the monitoring step, as recited in Claim 1.

For at least the above reasons, Applicants submit that Claim 1 is clearly patentable over *Leung et al.*[1]

Independent Claims 16, 31, and 32 are apparatus, memory medium, and program claims respectively corresponding to method Claim 1, and are believed to be patentable over *Leung et al.* for at least the same reasons as discussed above in connection with Claim 1. Additionally, independent Claim 33 includes features substantially similar to those of Claim 1. Accordingly, Claim 33 is believed to be patentable over *Leung et al.*, for reasons substantially the same as those discussed above in connection with Claim 1.

The other rejected claims in this application depend from one or another of the independent claims discussed above and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the

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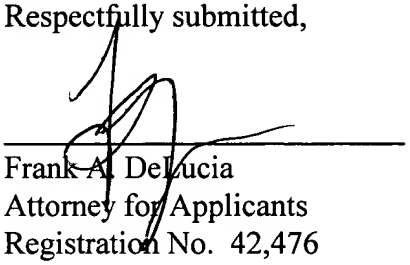
[1] It should be noted that the embodiments of the present invention referred to above are for purposes of illustration only and that Claim 1 should not be construed as being limited to the details of those embodiments.

invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,



Frank A. DeLucia
Attorney for Applicants
Registration No. 42,476

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

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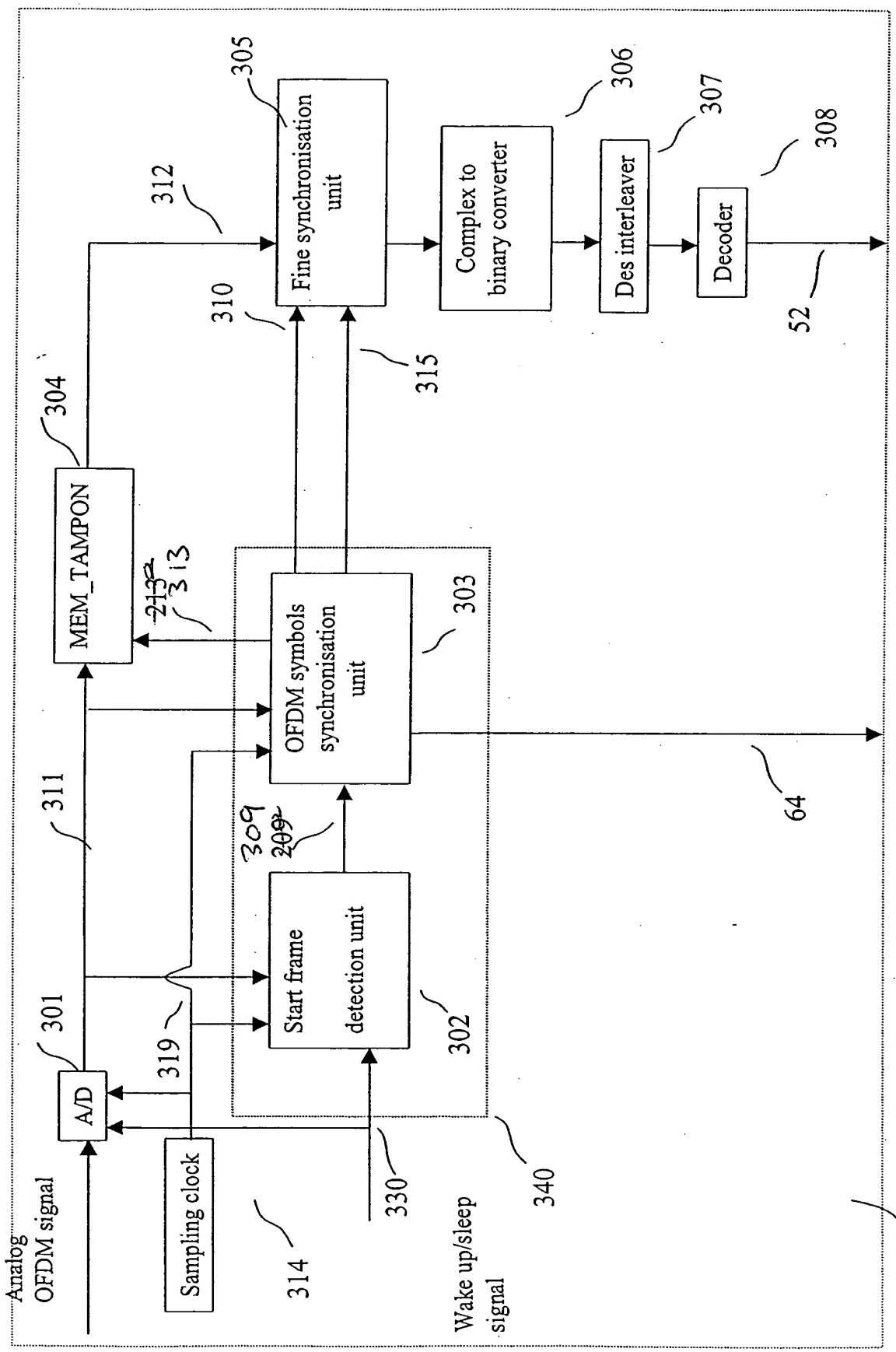

FIGURE 8

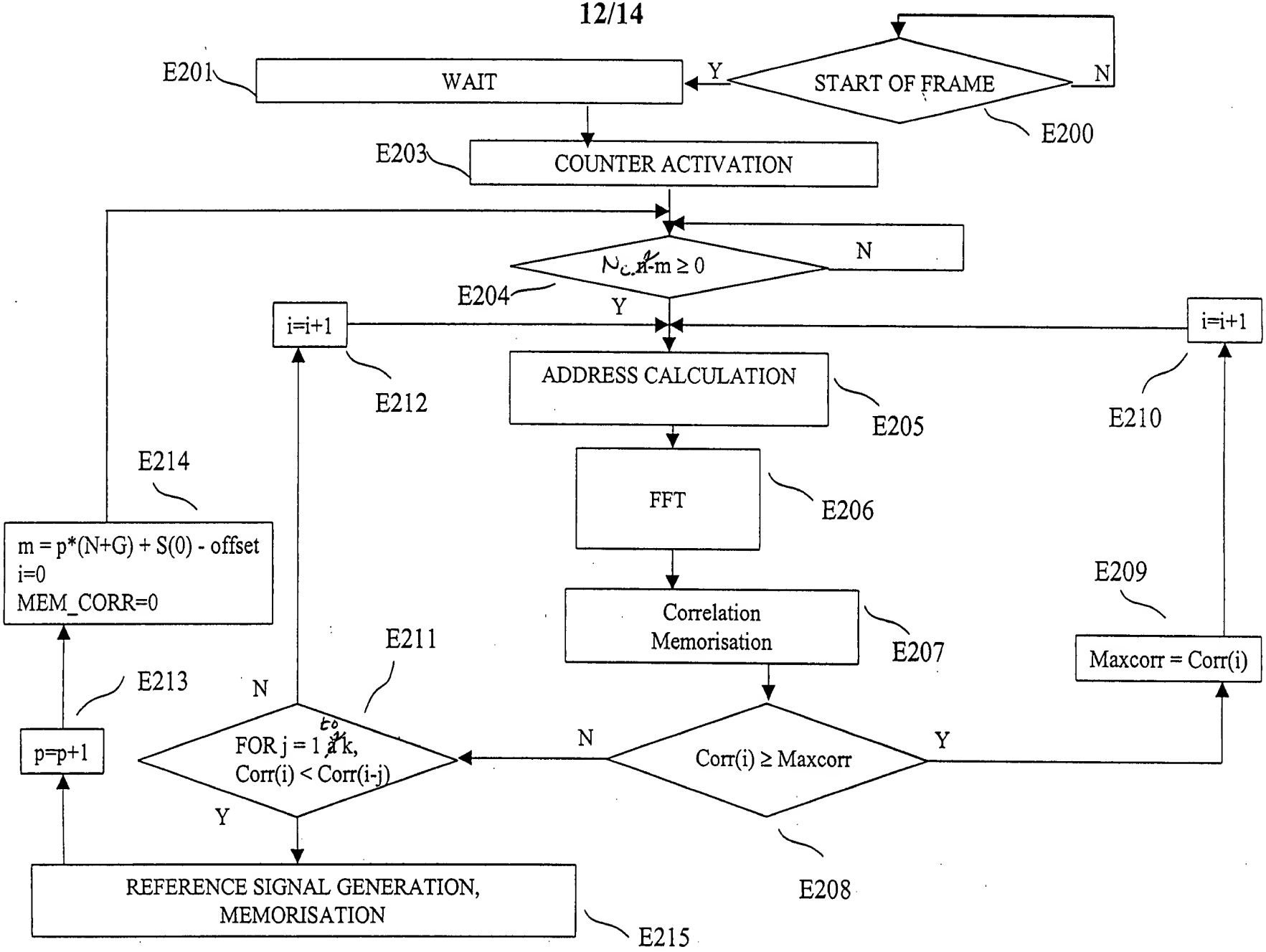

FIGURE 10

Appln. No. 09/597,143
Amendment Dated Feb. 2, 2005
Reply to Office Action of Nov. 2, 2004
Annotated Sheet